WHAT IS CLAIMED IS:

1. An optical switch film between at least two plates and having an electrical bias between the at least two plates, wherein the optical switching film comprises: a porous film.

2. The optical switching film claimed in claim 1, wherein the porous film includes microvoids formed in the porous film, such that the microvoids are continuous airspaces from a surface of the porous film to an opposing surface of the porous film.

3. The optical switching film claimed in claim 1, wherein the optical switching film has minimal pressure differential in a region of space between the porous film and the at least two plates.

4. The optical switching film claimed in claim 1, wherein the optical switching film operates as a switch at less than 100 volts.

5. The optical switching film claimed in claim 1, wherein porosity of the porous film is controlled by forming microvoids according to phase inversion in the porous film.

6. The optical switching film claimed in claim 2, wherein forming the microvoids in the porous film is selected from the group consisting of phase inversion, bubble nucleation, track etching, stretched polymers, laser-drilling, and coating over a textured carrier substrate having protrusions thereupon the textured carrier substrate.

7. The optical switching film claimed in claim 1, wherein the porous film is near ambient pressure of 760 Torr.

8. An optical device, comprising:

a) a porous film; and

b) at least two plates having the porous film between the at least two plates such that an optical switch is provided for the optical device.

9. The optical device claimed in claim 8, wherein the optical device is a display device.

10. The optical device claimed in claim 8, wherein the porous film has a controllable pore size.

11. The optical device claimed in claim 10, wherein the controllable pore size of the porous film is enabled by forming microvoids in the porous film with methods selected from the group consisting of phase inversion, rapid heating a wet coated layer, laser-drilling, and coating over a textured carrier substrate having protrusions thereupon the textured carrier substrate.

12. An optical device, comprising:

a) a multi-layered composite film formed simultaneously and coated on a carrier substrate, wherein the multi-layered composite film includes at least one electrically conductive layer; and

b) at least two plates having the multi-layered composite film between the at least two plates such that an optical switch is provided for the optical device.

13. The optical device claimed in claim 12, wherein the multi-layered composite film is formed on a releasable carrier substrate.

14. A method for simultaneously applying an electrically conductive layer during manufacturing of porous film surfaces, comprising the steps of:

a) providing a carrier substrate;

b) coating a releasable porous film onto the carrier substrate; and

c) coating the electrically conductive layer onto the releasable porous film at the same time as the releasable porous film is coated onto the carrier substrate.

15. The method claimed in claim 14, wherein the releasable porous film substantially minimizes pressure differential across the releasable porous film during operation of an optical switching device employing the releasable porous film.

16. A method for forming a releasable electrically conductive film, comprising the steps of:

a) providing a carrier substrate;

b) coating a releasable film onto the carrier substrate; and

c) coating the electrically conductive layer onto the releasable film at the same time as the releasable film is coated onto the carrier substrate.

17. The method claimed in claim 16, wherein the electrically conductive layer is an electrically conducting polymer selected from the group consisting of polythiophenes, polyacetylene, polyphenylene, polypyrroles, and polyanilines.

18. The method claimed in claim 16, wherein the electrically conductive layer includes electrically conductive agents.

19. The method claimed in claim 16, wherein the releasable film is a multilayer composite with at least one of the multilayers being electrically conductive.

20. A method for simultaneously applying an electrically conductive layer during manufacturing of optical switch film, comprising the steps of:

a) providing a carrier substrate;

b) coating a releasable optical switch film onto the carrier substrate; and

c) coating the electrically conductive layer onto the releasable optical switch film at the same time as the releasable optical switch film is coated onto the carrier substrate.

21. The method claimed in claim 20, wherein the releasable optical switch film includes a light scattering agent.

22. The method claimed in claim 20, wherein the electrically conductive layer is an electrically conducting polymer selected from the group consisting of polythiophenes, polyacetylene, polyphenylene, polypyrroles, and polyaniline.

23. The method claimed in claim 20, wherein the electrically conductive layer includes conductive agents.

24. The method claimed in claim 20, wherein the releasable optical switch film is a multilayer composite with one of the multilayers being electrically conductive.

25. The method claimed in claim 24, wherein the multilayer composite has a plate resisitivity less than 10^{12} Ohms/sq.

26. The method claimed in claim 19, wherein the multilayer composite has a plate resisitivity less than 10^{12} Ohms/sq.

27. The optical switching film claimed in claim 1, wherein the porous film includes randomly located pores.

28. The optical device claimed in claim 8, wherein the porous film includes randomly located pores.

29. The method claimed in claim 14, wherein the releasable porous film includes randomly located pores.

30. The method claimed in claim 14, wherein the releasable porous film has a peel force less than 25 N/m.

31. The method claimed in claim 20, wherein the releasable optical switch film has a peel force less than 25 N/m.

32. The optical switching film claimed in claim 1, wherein light transmission via the porous film is greater than 50% of non-porous optical switch films.

33. The optical switching film claimed in claim 1, wherein light transmission of the porous film is greater than 50%.

34. The optical device claimed in claim 8, wherein light transmission of the porous film is greater than 50%.

35. The optical device claimed in claim 12, wherein light transmission of the multi-layered composite film is greater than 50%.

36 The method claimed in claim 16, wherein light transmission of the releasable electrically conductive film is greater than 50%.

37. The method claimed in claim 20, wherein the light transmission of the releasable optical switch film is greater than 50%.

38. A method for fabricating an optical device, comprising the steps of:

a) providing a carrier substrate;

b) coating a releasable porous film onto the carrier substrate;

c) coating an electrically conductive layer onto the releasable porous film at the same time as the releasable porous film is coated onto the carrier substrate; and

d) assembling the releasable porous film between at least two electrically biased plates such that an optical switch is constructed for the optical device.